

Appendix 1. Essential Elements of Information, methodology/source, responsible entity, products, and timeline.

Essential Element of Information	Specific Information	Methodology/source	Responsible entity	Product	Timeline
1	Boundaries of disaster area (shaking/liquefaction, landslides, plume, fires, flooding, tsunami)	<ul style="list-style-type: none"> Geographic limits of damage Description of the severity of damage Estimated percentage of population evacuated or in need of evacuation 	<ul style="list-style-type: none"> Predictive modeling Remote/overhead sensing Aerial reconnaissance Media Assessment teams On-scene reports SOC/REOC/Coordination Center reports 	<ul style="list-style-type: none"> Geographic Information System (GIS) impact maps Situation report Status briefing 	<ul style="list-style-type: none"> Initial estimate within 6 hours and updated every operational period
2	Access points to disaster area	<ul style="list-style-type: none"> Location of access points located Credentials needed to enter Best routes to approach the disaster area 	ESF-1	<ul style="list-style-type: none"> GIS maps Displays Briefings 	<ul style="list-style-type: none"> Initial estimate within 6 hours and updated every 12 hours
3	Jurisdictional boundaries	<ul style="list-style-type: none"> Cities Counties Tribal nations Congressional districts Special districts 	ESF-5	<ul style="list-style-type: none"> GIS maps Jurisdictional profiles 	<ul style="list-style-type: none"> Initial estimate within 6 hours and updated every operational period
4	Population/community support impacts	<ul style="list-style-type: none"> Estimated population affected Number of shelters open/population Potential unmet shelter requirements Number of homes affected (destroyed, damaged) Percentage of banks functioning Percentage of grocery stores open and able to meet the needs of the public Percentage of pharmacies open and able to meet the needs of the public 	Operations	<ul style="list-style-type: none"> FEMA disaster information database Individual Assistance module Reporting Situation briefing Situation reports Displays GIS products 	<ul style="list-style-type: none"> Initial estimate within 12 hours and updated every operational period

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5 Hazard-specific information Hazardous, toxic, and radiological issues Safety hazards	<ul style="list-style-type: none"> Extent of fires Potential for (or extent of) flooding Number/estimate of collapsed structures potentially requiring Urban Search and Rescue Actual or potential for release of hazardous materials Actual or potential radiological incidents Affected locations and what they contain Actions being taken under the National Contingency Plan, if any Personal safety issues Public health concerns 	<ul style="list-style-type: none"> Assessment Team reports SOC/REOC/Coordination Center Reports Predictive modeling Centers for Disease Control Occupational Safety and Health Administration Nuclear Regulatory Commission U.S. Environmental Protection Agency Coast Guard 	<ul style="list-style-type: none"> ESF-5 Operations Safety officer 	<ul style="list-style-type: none"> GIS product depicting actual or potential threats Situation report Status briefing Daily intelligence summary Safety briefings/messages 	<ul style="list-style-type: none"> Initial estimate within 6 hours and updated every 12 hours
6 Seismic and/or other geophysical information	<ul style="list-style-type: none"> Location of epicenter Location of mud flows and land slides Potential magnitude of aftershocks Location of ground liquefaction sites Potential for tsunamis 	<ul style="list-style-type: none"> Remote sensing Management agency U.S. Geological Survey reports State liaisons Tsunami Warning Center SOC/REOC/Coordination Center reports 	Operations	<ul style="list-style-type: none"> GIS maps of affected areas Situation briefings Situation reports 	Initial estimate within 6 hours and updated every 6 hours
7 Weather	Forecast post-incident and implications for impending operations	National Weather Service	Operations	<ul style="list-style-type: none"> Status briefings Situation reports Daily intelligence summaries 	As soon as possible post incident and ongoing as required

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8 Demographics	<ul style="list-style-type: none"> Population of impacted areas Demographic breakdown of population including income levels, information on elderly and children Number/type of housing units in impacted areas Level of insurance coverage Tribal nations impacted Unemployment levels Foreign languages spoken in greater than 1 percent of the population 	<ul style="list-style-type: none"> GIS Predictive modeling Commercial products Census data 	Planning	<ul style="list-style-type: none"> Jurisdiction profiles GIS analysis Regional analysis and summary 	Initial information no later than 12 hours following incident
9 Predictive modeling	<ul style="list-style-type: none"> What U.S.-Hazards (HAZUS) models show for damage impacts and casualties 	<ul style="list-style-type: none"> HAZUS outputs 	<ul style="list-style-type: none"> ESF-5 FEMA Mapping & Analysis Center 	<ul style="list-style-type: none"> GIS products 	No later than 2 hours following incident
10 Initial needs and damage assessments	<ul style="list-style-type: none"> Reports of rapid needs assessment and preliminary damage assessment teams Damages reported by local, State and other Federal agency EOCs Requests for Federal support from the State 	<ul style="list-style-type: none"> Rapid needs assessment and preliminary damage assessment team reports HAZUS outputs Open sources Other Federal agency situation reports SOC/REOC/Coordination Center Reports 	Operations	<ul style="list-style-type: none"> Situation briefings Situation reports GIS products 	Initial estimate w/in 6 hours and updated every 12 hours

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11 Status of communications	<ul style="list-style-type: none"> Status of telecommunications service (including Internet and Infrastructure, including towers) Reliability of cellular service in affected areas Potential requirement for radio/satellite communications capability Status of emergency broadcast (TV, radio, cable) system and ability to disseminate information 	<ul style="list-style-type: none"> SOC/REOC/Coordination Center reports ESF-2 News media/open sources Internet service provider/telephone companies National Communication System member agencies 	ESF-2	<ul style="list-style-type: none"> Situation briefings Situation reports 	Initial estimate within 6 hours and updated every 12 hours
12 Status of transportation	<ul style="list-style-type: none"> Status of area airports Status of major/primary roads Status of critical bridges Status of railways Status of ports Status of evacuation routes Status of public transit systems Status of pipelines Accessibility to most severely impacted areas Debris on major roadways and bridges 	<ul style="list-style-type: none"> SOC/REOC/Coordination Center reports California Department of Transportation ESF-1/U.S. Department of Transportation Assessment team reports Community relations U.S. Army Corps of Engineers Remote sensing/aerial reconnaissance Predictive modeling 	ESF-1	<ul style="list-style-type: none"> Situation briefings Situation reports 	Initial estimate within 6 hours and updated every 12 hours
13 Status of Emergency Operations Centers	<ul style="list-style-type: none"> Status of local EOCs Status of State SOC/REOC Status of agency EOCs Status of RRCC Status of IMAT Status of back-up region RRCC 	<ul style="list-style-type: none"> SOC/REOC/Coordination Center Reports ESFs/other Federal agencies Regional offices RRCCs 	<ul style="list-style-type: none"> Operations ESF-5 	<ul style="list-style-type: none"> Situation briefings Situation reports GIS products 	No later than 1 hour following incident

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14 Status of critical infrastructure and facilities	<ul style="list-style-type: none"> Status of potable and non-potable water and sewage treatment plants/distribution systems Status of medical facilities (hospitals and nursing homes) Status of schools and other public buildings Status of fire and police facilities Status of levees and dams—U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, DWR 	<ul style="list-style-type: none"> Predictive models Remote sensing/aerial reconnaissance SOC/REOC/Coordination Center reports RRCC ESF-3/U.S. Army Corps of Engineers ESF-8/Public Health Service ESF-12/Department of Energy GIS 	Operations	<ul style="list-style-type: none"> Situation briefings Situation reports GIS products 	Initial estimate within 6 hours and updated every 12 hours
15 Status of energy system	<ul style="list-style-type: none"> Status of electrical generating facilities and distribution grid Households/people without electric power Status of natural gas transmission facilities and distribution pipelines Households/people without natural gas Status of refineries and gasoline and oil distribution systems 	<ul style="list-style-type: none"> ESF-12/Department of Energy reports California Emergency Utilities Association Nuclear Regulatory Commission reports Investor-owned utilities (e.g., PG&E) and municipal utility districts Remote sensing 	ESF-12	<ul style="list-style-type: none"> Situation briefings Situation reports GIS products 	Initial estimate within 6 hours and updated every 12 hours
16 Status of State and local operations	<ul style="list-style-type: none"> State and local priorities Major State operations in support of the local jurisdictions Status of support received under EMAC 	<ul style="list-style-type: none"> SOC/REOC/Coordination Center reports 	Operations	<ul style="list-style-type: none"> Situation briefings Situation reports 	Initial determination within 6 hours following incident and updated every operational period
17 Status of ESF activations	<ul style="list-style-type: none"> ESF that have been activated Major mission assignments that have been authorized 	<ul style="list-style-type: none"> Operations section RRCC Mission assignment lists 	Operations	<ul style="list-style-type: none"> Situation briefing Situation report 	Initial determination within 3 hours following incident and updated every operational period

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18 Status of remote sensing operations	<ul style="list-style-type: none"> Remote sensing missions that have been requested Target areas Data availability Whether a rapid assessment is being conducted Areas that are being assessed Report availability and format Whether the Civilian Air Patrol has been activated Where over-flights are being conducted Other aerial reconnaissance missions in progress Commercial remote sensing sources availability 	<ul style="list-style-type: none"> US Coast Guard US Geological Survey DoD National Aeronautics and Space Administration Private-sector entities 	ESF-5	<ul style="list-style-type: none"> Remote sensing imagery derived products 	Ongoing
19 Status of donations/ voluntary agency activities	<ul style="list-style-type: none"> Whether a donations hotline has been established or whether there is a need for the hotline Voluntary agencies that are actively involved in operations 	<ul style="list-style-type: none"> Voluntary agencies Agency/ESF reports 	Operations	<ul style="list-style-type: none"> Situation briefing Situation report 	Within 12 hours following disaster declaration; updated every operational period
20 Status of key personnel/ personnel issues	<ul style="list-style-type: none"> Location of IMAT team leader Designation and location of FCO Designation of Governor's Authorized Representative and State coordinating officer and location Locations of Joint Task Force and National Guard Commanders FEMA personnel killed or injured FEMA personnel impacted by the incident Staffing needs for response operations 	<ul style="list-style-type: none"> EOC/Coordination Center reports FEMA declarations Media reports 	Operations	Special reports to FCO and senior management	Within 2 hours following disaster declaration; updated every operational period

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21 Status of declarations	<ul style="list-style-type: none"> • Status of local emergency declarations • Status of state emergency declaration • Status of Presidential declaration • Jurisdictions are included • Types of assistance authorized • Special cost-share provisions regarding direct Federal assistance 	<ul style="list-style-type: none"> • EOC/Coordination Center Reports • FEMA declarations • The White House 	Operations	<ul style="list-style-type: none"> • Situation briefing • Situation report • FEMA disaster information database reporting 	As soon as information becomes available; updated every operational period
22 Priorities for mitigation	<ul style="list-style-type: none"> • Approved mitigation projects in the declared disaster area • Change to cost/benefit of the pre-approved project • Likely repair costs that will be substantial, exceeding 50 percent of structure value) 	<ul style="list-style-type: none"> • FEMA disaster information database • Community information • System and model projections • Remote sensing • Preliminary damage assessments and/or inspection teams 	<ul style="list-style-type: none"> • Mitigation 	<ul style="list-style-type: none"> • Situation briefing • Situation report 	Within 48 hours of incident
23 Priorities for response/upcoming activities	<ul style="list-style-type: none"> • Federal operational priorities • Priorities: water, food, power, medical, search and rescue, communications 	<ul style="list-style-type: none"> • EOC/Coordination Center reports • Rapid needs assessment team reports • Community Relations field reports • ESF reports • Elected Officials 	Operations	<ul style="list-style-type: none"> • Situation briefings • Situation reports • GIS products 	Initial determination w/in 6 hours following incident and updated every operational period
24 Major issues/shortfalls	<ul style="list-style-type: none"> • Actual or potential resource shortfalls of the affected counties • Anticipated requirements for Federal resources • Potential or actual Federal shortfalls • Potential sources for resource shortfalls • Resources available and where located 	<ul style="list-style-type: none"> • SOCC/REOC/Coordination Center reports • Rapid needs assessment team reports • Community relations field reports • ESF reports 	Logistics	<ul style="list-style-type: none"> • Situation briefings • Situation reports • GIS products 	Initial assessment w/in 6 hours following incident and updated every operational period